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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,072	08/27/2001	Hong Yang	H0498/7155	3068

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EXAMINER

FIORILLA, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,072

Applicant(s)

YANG ET AL.

Examiner

Christopher A. Fiorilla

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SM
#11

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 39-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-11,13,14,17-23,25-35,37 and 38 is/are rejected.
- 7) ☒ Claim(s) 8,12,15,16,24,36 and 50 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Applicant's election with traverse of Group I, claims 1-38,50 and 51 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that it is believed that a single search and examination covering all claims would not place undue burden on the examiner. This is not found persuasive because each group of invention includes unique search areas and examination considerations.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 39-49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in Paper No. 10.

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, the phrase "atom type" is indefinite. The addition of the word "type" to an otherwise definite expression extends the scope of the expression so as to render it indefinite. *Ex Parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1,5,18,19,25,27 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirata (5,676,906).
6. Claims 1,2,4,5,6,19,25 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Ghosh et al. (5,735,985).
7. Claims 1,2,3,4,5,6,7,11,19,20,21,23,25,26,30,32,33,34 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Bruck et al. (5,698,485).
8. Claims 1,5,6,19,25,26,30,32,33,37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Freimuth et al. *Formation of Complex Ceramic Miniaturized Structures by Pyrolysis of Poly(vinylsilazane)*.
9. Claims 1,2,5,6,9,13,14,17,18,19,20,21,22,25,31,32,33 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Lochhead et al. (6,039,897).
10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1,2,5,6,9,10,13,14,17,18,19,20,21,22,25,31,32,33 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Lochhead et al. (6,039,897).

Lochhead et al. does not disclose the specifically claimed viscosity (claim 10), however Lochhead et al. recognizes that manipulating the viscosity of the precursor material effects the mold filling of the precursor.

Determination of the specific viscosity would have been well within the realm of routine experimentation to one having ordinary skill in the art at the time of the invention. These parameters would have obviously been selected to optimize the process conditions (i.e. mold filling) and/or the properties of the final product (e.g. amount of defects).

13. Claims 1,5,18,19,25,27,28,29 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata (5,676,906).

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The claimed solvent materials are known in the art and have known physical properties. It would have been obvious to one skilled in the art at the time of the invention to use these solvent materials in the process of Hirata in view of the generic disclosure therein. See col. 5 "Method by Dissolution with Solvent".

14. Claims 1,2,3,4,5,6,7,11,19,20,21,23,25,26,30,32,33,34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al. (5,698,485) in view of Blum et al. (5,919,572).

Bruck et al. discloses forming ceramic articles from a polymeric precursor, but does not disclose curing in an inert atmosphere as recited in claim 23.

Blum et al. discloses curing polymeric ceramic precursors such as those disclosed by Bruc et al. in an inert atmosphere (col. 3, line 42). It would have been obvious to one having ordinary skill in the art at the time of the invention to cure the polymers of Bruck et al. in the inert atmosphere taught by Blum et al. in view of the generic disclosure of Bruck et al.

15. Claims 8,12,15,16,24,36 and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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16. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach or suggest:

- a method which utilizes a mold which comprises polydialkylsiloxane material;
- treating a mold by silanization or with an agent selected from the group consisting of alkylating, silylating, fluoroalkylating or alkylsilylating agents to render it inert;
- treating the surface of a substrate to render it inert; or
- heating or curing the precursor in a moisture free atmosphere

as substantially set forth in the claims.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Christopher A. Fiorilla
Primary Examiner
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